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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,280	12/08/2006	Winfried Bunsmann	BU-19PCT	9540

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EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	PAPER NUMBER
3618	
MAIL DATE	DELIVERY MODE
02/14/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/575,280	BUNSMANN ET AL.	
	Examiner	Art Unit	
	Frank B. Vanaman	3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-9 and 11-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-9, 11-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Status of Application

1. Applicant's amendment, filed Dec. 13, 2010, has been entered in the application. Claims 1, 2, 4-9, and 11-13 are pending, with claims 3, 10 and 14 now being canceled.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 4-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Browne et al. (US 3,211,491) in view of Margolis et al. (US 5,570,286).

4. Browne et al. teach a motor vehicle (11) having a body or frame (12, 13, 14) provided with at least one horizontally oriented strut (19) which can move longitudinally relative to the body as a result of longitudinal stress and/or deformation of the body, including plural parts which move with respect to each other (21, 22) and extend over at least almost the entire strut (note figure 1), the portions movable with respect to an energy converter (26) which at least partially converts kinetic energy of motion into another form of energy (e.g., heat due to internal friction associated with the deformation of the converter) damping the relative motion. Browne et al. fail to teach the energy converter as explicitly converting the energy into one of electric or hydraulic energy, and further being connected to an energy storage device, including a pressure medium reservoir which may be compressed by a moving part, or a coil that is penetrated by a moving part of the strut. Margolis teaches that it is well known to provide different types of converters for absorbing relative motion between movable portions of a strut (note strut and converter assemblies 104, 114, 20a, 20b, 20c, 47, 47', etc), which are connected to an energy storage device (32, or 78, or 92), the arrangement optionally including at least a pressure medium reservoir (67, 68, 67', 68' or 94, 95) which can be compressed by a moving part (70, or 70', or 96), and/or wherein fluid can be moved by the moving part (70, 71), and/or wherein a coil arrangement (44) is penetrated by a magnet (42) to generate electricity (to be stored in 32). It would have been obvious to one of ordinary skill in the art at the time of the invention to use one of the alternative converter devices as taught by Margolis (and which may be alternatively

usable) - the compressible reservoir, the fluid moving reservoir or the electrical coil arrangement, in place of the arrangement taught by Browne et al. which does not capture the dissipated energy, for the purpose of capturing the energy associated with the deformation, facilitating more efficient vehicle operation rather than wasting the energy which has been dissipated. As regards claim 7, the reference to Margolis et al. teaches that the storage device (32) may be a capacitor, but does not explicitly teach that the device is a battery. In that it is well known to use a battery to store captured energy for extended periods of time, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the storage device taught by Margolis as a battery, rather than a capacitor, for the purpose of facilitating longer term storage of the captured energy.

The reference to Browne et al. as modified by Margolis et al. fails to specifically teach that the strut portions are installed horizontally below an underbody of the vehicle. It is very well known to locate a stiffening strut beneath a vehicle underbody and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the stiffening struts taught by Browne et al. as modified functionally by Margolis et al., beneath a vehicle underbody for the purpose of reducing torsional movement of the vehicle chassis and frame, and/or to advantageously connect the struts in a location where they do not interfere with access to the vehicle engine, and/or to raise the overall natural frequency of the frame, and/or optimize stiffness of the vehicle frame and/or to improve stability of the vehicle and/or to improve the quality of the driving feel of the vehicle to the passengers.

The reference to Browne et al. as modified by Margolis et al. fails to specifically teach that the movement of the relatively movable parts of the converter "can be more than a millimeter". Where a general condition is taught (in this case, the relative movement between the members), an adjustment of the magnitude of the condition is known to be within the skill of the ordinary practitioner, at least when such an adjustment yields a predictable result. In this case, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow the motion of the relatively movable parts to be more than a millimeter in order to facilitate damping of higher

amplitude vibrations which result in relative body motion of a magnitude greater than one millimeter, such as the damping of vibration associated with a very rough road or badly balanced tire.

As regards claim 11, the reference to Browne et al. fails to specifically teach the use of a common energy converter to which more than one strut is connected. Browne et al. do teach that the strut portions closer to the vehicle cabin (away from the viewer, figure 1) are mounted close to one another, and in that it is well held in the mechanical arts to be within the skill of the ordinary practitioner to (1) reposition an already taught element and to (2) integrate plural elements into a single element, it would firstly have been obvious to one of ordinary skill in the art at the time of the invention to reposition the converter portions of the struts proximate one end of each strut taught by Browne et al. such as proximate the vehicle cabin, for the purpose of reducing the size of the strut portion which is located over the open compartment, thus allowing improved access to the contents of the compartment, such as the engine and in that such a repositioning would place the converter portions very closely proximate one another, it would secondly have been obvious to one of ordinary skill in the art at the time of the invention to integrate both converters into a single assembly which mounts the cabin end portions of each strut, for the purpose of condensing the space required to locate and mount the converters (in that both converters would be mounted in a common single housing or on a common single mount) and reducing the number of parts required to mount the struts at their respective ends proximate the cabin.

5. Claims 1, 2, 4-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Browne et al. in view of Margolis et al. and Kohlmeier (US 5,466,005). Alternatively to the rejection of claims 1, 2, 4-9 and 11-13 as set forth above, with regard to the claimed location of the strut elements, the reference to Browne et al. as modified by Margolis et al. fails to specifically teach that the strut portions are installed horizontally below an underbody of the vehicle. Kohlmeier teaches that it is very well known to locate a stiffening strut (6, 8, 9) horizontally beneath a vehicle underbody (see figure 1) and it would have been obvious to one of ordinary skill

in the art at the time of the invention to provide the stiffening struts taught by Browne et al. as modified functionally by Margolis et al., horizontally beneath a vehicle underbody as taught by Kohlmeier for the purpose of reducing torsional movement of the vehicle chassis and frame, and/or to advantageously connect the struts in a location where they do not interfere with access to the vehicle engine, and/or to raise the overall natural frequency of the frame, and/or optimize stiffness of the vehicle frame and/or to improve stability of the vehicle and/or to improve the quality of the driving feel of the vehicle to the passengers.

Response to Comments

6. Applicant's comments, filed with the amendment, have been carefully considered. Applicant asserts, in essence, that the reference to Margolis et al. is not analogously applicable to the arrangement taught by Browne et al., primarily on the point of the magnitude and direction of the movement. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference to Margolis is reasonably pertinent to the problem to be solved. Both Browne et al. and Margolis et al., as well as applicant, are directed to connecting struts between portions of the same vehicle which exhibit relative motion there-between. Both Browne et al. and Margolis et al., anticipate providing an element which performs energy conversion. Relative motion in Browne et al. is dissipated in heat through the deformation of the resilient element, while Margolis et al. teach that the relative motion can be converted into an energy form which is collected and re-used. As such, both references are directed to the analogous problem solving arena of accommodating relative motion between two parts of a vehicle and converting that relative motion to another form of energy. Browne et al. does not convert the dissipated energy into a form which can be re-used, so would reasonably be deemed ready for improvement in light of Margolis et

al. who teach that energy associated with relative movement between two vehicle parts may be absorbed and collected for further beneficial use.

Applicant's comments concerning the source of the energy absorbed by the energy conversion device[s] in Margolis et al. are somewhat confusing, in that a vehicle traversing a bump or discontinuity would result in relative motion between frame parts as well, which would be absorbed and dissipated by an arrangement as taught by Browne et al. If applicant is aware of evidence that somehow the vehicle taught by Browne et al. would generate no relative motion between the portions connected by the struts upon traversing a bump or other discontinuity, then such evidence should have been made of record. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965).

Applicant's comments on page 7 of the response that the struts and car-body are rigid appears to be completely at odds with the disclosure of the specification and the claim recitations, in that were the elements to be entirely rigid, as applicant well knows, no relative motion would occur, and no energy would be generated, dissipated or collected. Further, applicant's claims now explicitly recite a degree of relative motion which would clearly not occur with rigid components.

Conclusion

7. Applicant's amendment necessitated the new and/or modified ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A response to this action should be mailed to:
Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,
Or faxed to:
PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618

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